

An Introduction to the Delta Smelt Risk Assessment Matrix

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Introduction

- Purpose of the DSRAM
- Who developed the DSRAM
- How the DSRAM was developed
- Summary of important features
- Using the new DSRAM
- Modifying the DSRAM

Purpose of the DSRAM

- Part of the 2004 OCAP Biological Assessment
- A science-based guideline for the formulation of recommendations
- Helps to minimize incidental take at the CVP and SWP
- Act proactively to protect delta smelt
- Both a product and a tool of the Delta Smelt Working Group

Developers

- The Delta Smelt Working Group consists of technical representatives from USFWS, CDFG, CDWR, USEPA, USBR and CBDA

How the DSRAM was Developed

- Updated and modified from the existing delta smelt decision tree
- Developed using an iterative, consensus process
- Uses a flexible rather than a prescriptive process

DSRAM vs Decision “Tree”

- Criteria trigger meetings, not actions
- Takes actions proactively
- A suite of potential tools
- Extensive footnotes
- Working Group meets prior to the DAT call
- Subject to independent peer review

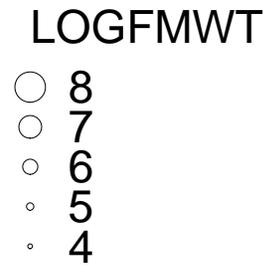
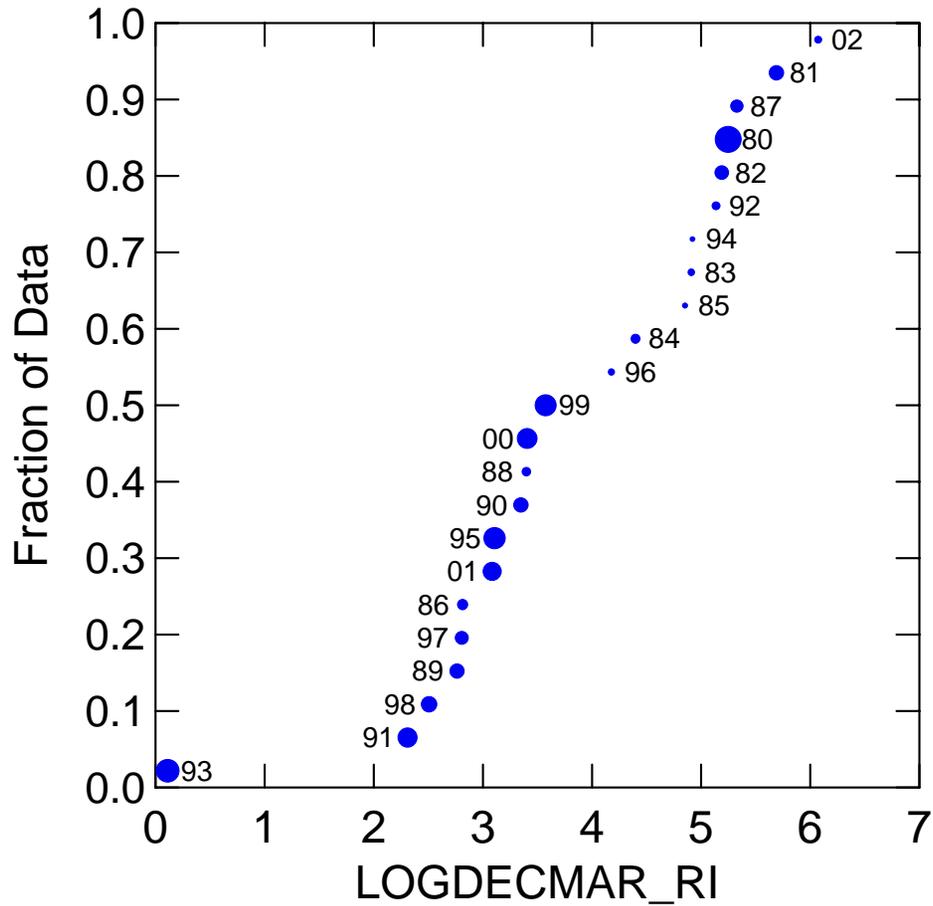
Life Stage	Adults	Adults	Adults	Adults and larvae	Adults and larvae
Previous Year's Fall Midwater Trawl Recovery Index (1)	Index below 74	Index below 74	Index below 74	Index below 74	Index below 74
Risk of Entrainment (2)				X2 upstream of Chipps Island and temps are $\geq 12^{\circ}$	X2 upstream of Chipps Island and temps are between 12° and 18°C
Duration of Spawning period (number of days temperatures are between 12° and 18°C) (3)					39 days or less by April 15
Spawning Stage as determined by spring Kodiak trawl and/or salvage (4)			Presence of Adults at spawning stage ≥ 4	Adult spawning stage ≥ 4	Adult spawning stage ≥ 4

How the DSRAM will be Used

- Effective in water year 2005
- USBR and/or CDWR will inform the Working Group when a meeting is needed
- If the group meets, a consensus recommendation is formulated; minority opinions are important too
- Recommendations shared with the DAT and forwarded to the WOMT
- Working Group follows up

How do we know the DSRAM is working?

- Ratio of winter salvage to Fall Mid-Water Trawl index
- Anticipate having no more years in the upper quadrant
- If we don't, it's working
- If we do, we need to reconsider our process



Modifying the DSRAM

- The DSRAM can be changed without reinitiating on the entire OCAP delta smelt biological opinion.
- The Working Group can easily incorporate the latest delta smelt sampling and science into the DSRAM

Summary

- The DSRAM maybe found as Appendix A to the OCAP Biological Assessment at:

<http://www.usbr.gov/mp/cvo/ocapBA.html>

Acknowledgements

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- Others: Ann Lubas-Williams (USBR), John Burke (USBR), Cay Goude (USFWS)